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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/670,580

09/25/2003

Chip Hewette

EI-7602

7454

34769 7590 02/02/2006

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EXAMINER

POULOS, SANDRA K

ART UNIT

PAPER NUMBER

1714

DATE MAILED: 02/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/670,580

Applicant(s)

HEWETTE ET AL.

Examiner

Sandra K. Poulos

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/05/04; 3/02/05; 4/26/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement filed 5/05/2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. Specifically, the reference entitled "Testing Methods for Oxidation Stability of Lubricating Oils" has not been considered because applicant has not provided a copy of the reference.

Examiner has considered the information disclosure statement filed 3/02/2005, however, the information on the IDS indicates a different application number, attorney docket number, applicants, and filing date, therefore examiner is uncertain whether the submitted material was intended for this application. Clarification is requested.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1714

2. Claims 1-10 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Barber et al (US 5,126,064).

Barber '064 discloses a lubricant composition for gears and slip differentials (col 1, lines 4-6). The lubricant composition comprises 1-20 wt% of one or more extreme pressure or anti-wear agents, and from 0.05-1.5 wt% of at least one succinimide derivative, including 1-methylpentadecyl succinimide, 1-propyltridecenyl succinimide, 1-pentyltridecenyl succinimide, 1-tridecylpentadecenyl succinimide and 1-tetradecyleicosenyl succinimide (col 8, lines 21-52). The succinimides are described as dispersants (col 5, lines 20-25). The sulphur-containing extreme pressure or antiwear agent is sulphur, sulphurised olefin, sulphurised ester, sulphurised fatty acid, dialkyl polysulphide, or sulphurized polysulphide (col 8, lines 61-66). The composition also contains antioxidants (col 4, lines 60-68; col 5, lines 1-2, 12-14) and antifoaming agents (col 5, lines 15-19). The lubricating oil may be a mineral oil, synthetic oil, a natural oil, or mixtures (col 2, lines 38-40).

A limited slip differential which comprises a series of clutch plates immersed in the lubricant composition is disclosed (col 10, lines 29-37; col 1, lines 30-49). Barber '064 further describes differential gears and how the lubricant is applied in column 1, lines 4-50.

Boron is not disclosed as being present in the composition. Phosphorus is not present in the composition disclosed in claims 1-6 (col 8, lines 21-66). The amounts (given in wt%) overlap the weight ratios currently claimed.

The lubricant composition is used in differential gear systems in order to reduce noise without adversely affecting the performance of the differential. Since the performance is maintained and the composition is the same as the currently claimed invention, it is examiner's position that the composition disclosed by Barber '064 would inherently achieve satisfactory scores on both the ISOT test and L60-1 test for lubricating oils.

Therefore, Barber '064 anticipates the cited present claims.

3. Claims 11-15 and 17-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Komatsubara (US 2001/0034305).

In Comparative Example 1 in Table 1 (pages 6-7), Komatsubara '305 discloses a lubricant composition containing: 89.598% refined mineral oil, 3.3% boron-free polybutenylsuccinimide dispersant (boron content mass is 0%), 0.3% each of two types of oxidation inhibitors, 0.05% tolytriazole corrosion inhibitor, 0.002% polydimethylsiloxane anti-foaming agent, and no phosphorus additives.

The ratio of inhibitor to dispersant is calculated to be about 1:5 ("inhibitor" being the combination of oxidation and corrosion inhibitors), which falls within the currently claimed range.

Although the composition is presented as a Comparative Example, it is noted that "nonpreferred disclosures can be used. A nonpreferred portion of a reference disclosure is just as significant as the preferred portion in assessing the patentability of claims." See *In re Nehrenberg*, 280 F.2d 161, 126 USPQ 383 (CCPA 1960).

The composition is presented in the context of lubrication for automotive gears (paragraphs 2-6, 9).

Therefore, Komatsubara '305 anticipates the cited present claims.

4. Claims 1-31 and 42-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Waldbillig (US 3,865,739).

Waldbillig '739 discloses gear oil for automotive systems that contain: 0.5-5 wt% alkenyl succinimide dispersants (col 4, lines 52-68; col 5, lines 1-5), about 85-90 wt% hydrocarbon base oil (col 4, lines 1-3), 0.1-10 wt% extreme pressure and antiwear agents such as sulfurized terpenes and polyalkyl polysulfides (col 4, lines 40-52), 0.1-5 wt% antioxidants (col 5, lines 46-51), 0.05-10 wt% thiadiazole corrosion inhibitors (col 3, lines 64-68; col 5, line 1), and antifoamants such as silicone polymers (col 6, lines 4-5). There is no indication that boron additives are used at any point in the composition, nor are there phosphorus additives disclosed.

The ratio of inhibitor to dispersant is calculated to be in the range of about 1:3 to 30:1 ("inhibitor" being the combination of antioxidants and thiadiazole corrosion inhibitors), which falls within the currently claimed range, particularly at the 1:3 range. The ratio of dispersant to extreme pressure additive/antiwear agent is calculated to be in the range of about 5:1 to 1:20, which also falls within the currently claimed ranges.

The lubricant oil composition is effective as a corrosion-inhibited gear oil and contains the same components and the currently claimed invention, therefore it is

Art Unit: 1714

examiner's position that the composition disclosed by Waldbillig '739 would inherently achieve satisfactory scores on both the ISOT test and L60-1 test for lubricating oils.

Therefore, Waldbillig '739 anticipates the cited present claims.

5. Claims 11-21, 32-37-41, 43, and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshimura et al (US 5,922,656).

Yoshimura '656 discloses gear oil for automatic transmission vehicles (col 1, lines 1-50; col 2, lines 8-16). The amounts of the components included in the lubricant are disclosed in the table in column 10. The ashless dispersants includes polybutenyl succinimide, polybutenyl succinamide, benzyl amine, and succinate ester types (col 9, lines 48-51). Typical oxidation inhibitors (col 9, lines 52-58) and extreme pressure agents (col 9, lines 59-62) are disclosed. Metal deactivators include benzotriazoles and thiadiazoles. The succinimide dispersant appear to be free of boron and phosphorus (col 9, lines 48-51).

When the upper range of the ashless dispersant and antifoaming agent are used, there is a ratio of 5:1 of dispersant to antifoaming agent.

The lubricant composition shows high anti-shudder properties, high anti-shudder durability for extended periods, high property of preventing clogging of friction material, and sufficient transmission torque capacity, while retaining the lubricant characteristic required for use in automatic transmissions (abstract). Therefore, it is examiner's position that the composition disclosed by Yoshimura '656 would inherently achieve satisfactory scores on both the ISOT test and L60-1 test for lubricating oils.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Khorramian (US 5,439,605) discloses borated or non-borated, succinimide dispersants that are with or without phosphorous. Inhibitors, antiwear/extreme pressure additives, and antioxidants are included.

Walters et al (US 5,254,272) discloses a lubricant composition for piston and screw compressors, industrial gear systems, and in hydraulic fluids (col 1, lines 41-45). The lubricant composition comprises (a) metal-free antiwear additive containing sulphur and/or phosphorus, and (b) a corrosion inhibitor in the form of an amino succinate ester, and optionally, additional corrosion inhibitors, ashless dispersants (boron-free), antioxidants, and anti-foam agents (col 1, lines 46-62; col 4, lines 1-51). The corrosion inhibitor is present from 0.002 to 0.5 wt% (col 3, lines 25-31). The lubricating oil base stocks are of mineral, synthetic, or biological origin (col 3, lines 32-44). When the antiwear additive may be chose as sulphur-containing, examples of which are disclosed in col 2, lines 41-51).

Strickland (US 2003/0004070) discloses a lubricant for gas-fuelled engines in motor vehicles (paragraphs 1-4). The composition includes ashless succinimide dispersants such as polyisobutenyl succinimide that are boron-free (paragraphs 62-68). The amounts of other additives such as antiwear agents, corrosion inhibitors, antifoaming agents, and base oils are disclosed in the table in paragraph 78. The example lubricating oil in paragraph 89 includes succinimide, benzotriazole, a sulfurized fatty ester, and base oil.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra K. Poulos whose telephone number is (571) 272-6428. The examiner can normally be reached on M-F 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1714

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SKP

Sandra K. Poulos

1/30/2006

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